

§ 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments

Please amend the application as follows:

In the Claims:

Please cancel claims 57-101 without prejudice or disclaimer.

Please add the following new claims:

122. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding amino acids 1 to 22 in SEQ ID NO:2.
123. (New) The nucleic acid molecule of claim 122, further comprising a heterologous polynucleotide.
124. (New) The nucleic acid molecule of claim 123, wherein said heterologous polynucleotide encodes a heterologous polypeptide.
125. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 122 into a vector.

126. (New) A vector comprising the nucleic acid molecule of claim 122.
127. (New) The vector of claim 126, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
128. (New) A host cell comprising the nucleic acid molecule of claim 122.
129. (New) The host cell of claim 128, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
130. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 129 under conditions such that said polypeptide is expressed, and recovering said polypeptide.
131. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding amino acids 33 to 56 in SEQ ID NO:2.
132. (New) The nucleic acid molecule of claim 131, further comprising a heterologous polynucleotide.
133. (New) The nucleic acid molecule of claim 132, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

134. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 131 into a vector.
135. (New) A vector comprising the nucleic acid molecule of claim 131.
136. (New) The vector of claim 135, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
137. (New) A host cell comprising the nucleic acid molecule of claim 131.
138. (New) The host cell of claim 137 wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
139. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 138 under conditions such that said polypeptide is expressed, and recovering said polypeptide.
140. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding amino acids 59 to 82 in SEQ ID NO:2.
141. (New) The nucleic acid molecule of claim 140, further comprising a heterologous polynucleotide.

142. (New) The nucleic acid molecule of claim 141, wherein said heterologous polynucleotide encodes a heterologous polypeptide.
143. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 140 into a vector.
144. (New) A vector comprising the nucleic acid molecule of claim 140.
145. (New) The vector of claim 144, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
146. (New) A host cell comprising the nucleic acid molecule of claim 140.
147. (New) The host cell of claim 146, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
148. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 147 under conditions such that said polypeptide is expressed, and recovering said polypeptide.
149. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding amino acids 95 to 112 in SEQ ID NO:2.

150. (New) The nucleic acid molecule of claim 149, further comprising a heterologous polynucleotide.
151. (New) The nucleic acid molecule of claim 150, wherein said heterologous polynucleotide encodes a heterologous polypeptide.
152. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 149 into a vector.
153. (New) A vector comprising the nucleic acid molecule of claim 149.
154. (New) The vector of claim 153, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
155. (New) A host cell comprising the nucleic acid molecule of claim 149.
156. (New) The host cell of claim 155, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
157. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 156 under conditions such that said polypeptide is expressed, and recovering said polypeptide.

158. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding amino acids 179 to 190 in SEQ ID NO:2.
159. (New) The nucleic acid molecule of claim 158, further comprising a heterologous polynucleotide.
160. (New) The nucleic acid molecule of claim 159, wherein said heterologous polynucleotide encodes a heterologous polypeptide.
161. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 158 into a vector.
162. (New) A vector comprising the nucleic acid molecule of claim 158.
163. (New) The vector of claim 162, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
164. (New) A host cell comprising the nucleic acid molecule of claim 158.
165. (New) The host cell of claim 164, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.

166. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 165 under conditions such that said polypeptide is expressed, and recovering said polypeptide.
167. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding amino acids 196 to 205 in SEQ ID NO:2.
168. (New) The nucleic acid molecule of claim 167, further comprising a heterologous polynucleotide.
169. (New) The nucleic acid molecule of claim 168, wherein said heterologous polynucleotide encodes a heterologous polypeptide.
170. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 167 into a vector.
171. (New) A vector comprising the nucleic acid molecule of claim 167.
172. (New) The vector of claim 171, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
173. (New) A host cell comprising the nucleic acid molecule of claim 167.

174. (New) The host cell of claim 173, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
175. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 174 under conditions such that said polypeptide is expressed, and recovering said polypeptide.
176. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding an amino acid sequence at least 95% identical to amino acids 25 to 201 in SEQ ID NO:4.
177. (New) The nucleic acid molecule of claim 176 encoding amino acids 25 to 201 of SEQ ID NO:4.
178. (New) The nucleic acid molecule of claim 177 comprising nucleotides 73 to 603 of SEQ ID NO:3.
179. (New) The nucleic acid molecule of claim 176, further comprising a heterologous polynucleotide.
180. (New) The nucleic acid molecule of claim 179, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

181. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 176 into a vector.
182. (New) A vector comprising the nucleic acid molecule of claim 176.
183. (New) The vector of claim 182, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
184. (New) A host cell comprising the nucleic acid molecule of claim 176.
185. (New) The host cell of claim 184, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
186. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 185 under conditions such that said polypeptide is expressed, and recovering said polypeptide.
187. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding an amino acid sequence at least 95% identical to amino acids 202 to 224 in SEQ ID NO:4.
188. (New) The nucleic acid molecule of claim 187 encoding amino acids 202 to 224 of SEQ ID NO:4.

189. (New) The nucleic acid molecule of claim 188 comprising nucleotides 604 to 672 of SEQ ID NO:3.
190. (New) The nucleic acid molecule of claim 187, further comprising a heterologous polynucleotide.
191. (New) The nucleic acid molecule of claim 190, wherein said heterologous polynucleotide encodes a heterologous polypeptide.
192. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 187 into a vector.
193. (New) A vector comprising the nucleic acid molecule of claim 187.
194. (New) The vector of claim 193, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
195. (New) A host cell comprising the nucleic acid molecule of claim 187.
196. (New) The host cell of claim 195, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.

197. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 196 under conditions such that said polypeptide is expressed, and recovering said polypeptide.
198. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding an amino acid sequence at least 95% identical to amino acids 225 to 417 in SEQ ID NO:4.
199. (New) The nucleic acid molecule of claim 198 encoding amino acids 225 to 417 of SEQ ID NO:4.
200. (New) The nucleic acid molecule of claim 199 comprising nucleotides 673 to 1251 of SEQ ID NO:3.
201. (New) The nucleic acid molecule of claim 198, further comprising a heterologous polynucleotide.
202. (New) The nucleic acid molecule of claim 201, wherein said heterologous polynucleotide encodes a heterologous polypeptide.
203. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 198 into a vector.

204. (New) A vector comprising the nucleic acid molecule of claim 198.
205. (New) The vector of claim 204, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
206. (New) A host cell comprising the nucleic acid molecule of claim 198.
207. (New) The host cell of claim 206, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
208. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 207 under conditions such that said polypeptide is expressed, and recovering said polypeptide.
209. (New) An isolated nucleic acid molecule comprising a polynucleotide encoding an amino acid sequence at least 95% identical to amino acids 342 to 408 in SEQ ID NO:4.
210. (New) The nucleic acid molecule of claim 209 encoding amino acids 342 to 408 of SEQ ID NO:4.
211. (New) The nucleic acid molecule of claim 210 comprising nucleotides 1024 to 1224 of SEQ ID NO:3.

212. (New) The nucleic acid molecule of claim 209, further comprising a heterologous polynucleotide.
213. (New) The nucleic acid molecule of claim 212, wherein said heterologous polynucleotide encodes a heterologous polypeptide.
214. (New) A method of producing a vector which comprises inserting the nucleic acid molecule of claim 209 into a vector.
215. (New) A vector comprising the nucleic acid molecule of claim 209.
216. (New) The vector of claim 215, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
217. (New) A host cell comprising the nucleic acid molecule of claim 209.
218. (New) The host cell of claim 217, wherein said nucleic acid molecule is operably associated with a heterologous regulatory polynucleotide.
219. (New) A method of producing a polypeptide which comprises culturing the host cell of claim 218 under conditions such that said polypeptide is expressed, and recovering said polypeptide.